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### REMARKS

#### 35 U.S.C. § 103

Claims 1, 9, 10, and 29 have been rejected under 35 U.S.C. § 103 as being obvious over Vandenberg (US 3883449). The rejection is traversed for the following reasons.

In the Final Office Action, Vandenberg is held to be still applicable to claims 1, 9 and 10 since the claim recites "vinyl ethers" and Vandenberg discloses vinyl glycidyl ether, allyl glycidyl ether and others. These glycidyl ethers and esters are held as being within the scope of the recited vinyl ethers. Applicants respectfully disagree.

Applicants recite "vinyl ethers" in claim 1. In the art, vinyl ethers are compounds where the oxygen in the ether component is directly bonded to the unsaturated carbon of the vinyl group. This definition is reflected in the multiple editions of *The Condensed Chemical Dictionary*, (7<sup>th</sup> – published 1966, 10<sup>th</sup> – published 1981, and 13<sup>th</sup> – published 1997), wherein vinyl ether is defined as  $\text{CH}_2\text{:CHOCH:CH}_2$  – reflecting a direct bonding of the ether and vinyl components. In *Handbook of Polymer Synthesis*, Hans Rytger Kricheldorf, p 145 (1<sup>st</sup> edition, 1991), it is stated "vinyl ethers comprise that class of olefinic monomers which possess a double bond situated adjacent to an ether oxygen." In *Polymeric Materials Encyclopedia*, Salamone, pgs 8572-8573 (1996), identifies vinyl ethers as meeting the above description of double bond being directly bonded to the unsaturated carbon of the vinyl group.

In Applicants' specification, the disclosed exemplary vinyl ethers, i.e. methyl, ethyl and isobutyl vinyl ether, meet the conventional art definition of a vinyl ether and are those specifically identified by Salamone as 'vinyl ethers'.

In the glycidyl ethers and esters disclosed by Vandenberg, the ether and vinyl groups are not directly bonded, or adjacent, to one another. In the vinyl glycidyl ether and allyl glycidyl ether, the vinyl and ether components are separated by intermediate carbons. In the methacrylate and acrylates of Vandenberg, the vinyl component is separated from the ether component by a ketone. Those skilled in the art would not recognize the noted compounds of Vandenberg are not in the recited monomer class of 'vinyl ethers'.

Thus Vandenberg fails to teach or disclose monomers within the recited group of the rejected claims 1, 9, and 10.

Regarding claim 29, in response to Applicants' arguments regarding the teachings of Vandenberg and the use of water, in the Final rejection, it is held that since Vandenberg

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teaches an excess of water in the modification of the catalyst, excess water could be present and available as a catalyst in the monomer polymerization. Applicants disagree.

Because an excess of water is used to modify the trialkyl aluminium, it is not automatic that an excess of water will be retained in the polymerization vessel. First, it is not uncommon to dry the catalyst prior to reaction, thus removing any excess water from the catalyst. Second, for every exemplary catalyst reaction, Vanderberg teaches using only 0.67 moles of water per aluminum, thus actually using a combination of aluminium trialkyl and water-modified trialkyl aluminium in the exemplary reactions. Third and most important, Vanderberg teaches a mandatory second catalyst of  $\text{BF}_3$ ,  $\text{PF}_5$ ,  $\text{POF}_3$ , or  $\text{SbF}_5$  is combined with the trialkyl aluminium, and such second catalyst readily hydrolyse in water (recognized by Vanderberg in col 8, lines 32-36); any excess water present will be readily consumed by the second catalyst. Such early hydrolysing of the second mandatory catalyst is apparently undesired, as suggested by every example of Vanderberg which employ less than 1 mole of water in the reaction with trialkyl aluminum, thus preventing early hydrolysing of the second catalyst which would reduce the catalyst availability for the desired polymerization.

Thus, one skilled in the art reading the full teachings of Vanderberg in regards to the catalyst and catalyst preparation would realize that water is not present as an initiator in the polymerization reaction of the monomers of Vanderberg. Any water would be consumed in reaction with both of the catalyst required by Vanderberg. The use of water as an initiator in the polymerization reaction is contrary to the teachings of Vanderberg.

To establish *prima facie* obviousness, there 1) must be some suggestion or motivation in the art to modify or combine the references; 2) must be a reasonable expectation of success and 3) the combined references must teach or suggest all the claim limitations. Graham v. Deere

Vanderberg fails to teach or motivate one skilled in the art to provide a polymerization system as recited in independent claims 1 and 29. It is respectfully requested that the rejections be reconsidered and withdrawn.

#### Nonstatutory Obviousness-type Double Patenting

A. Claims 1, 9, 10, 28, 2-7, 11-18, 20-30, 32, 33, 35-40, 48-50, 53, and 59 stand provisionally rejected under the judicially created doctrine of obviousness-type double

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patenting over claims 1-58 of copending US Application 11/728306 (Attorney Docket No. 2007EM051). Applicants respectfully traverse this rejection.

B. Claims 1, 9, 10, 22-25, 32, and 59 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting over claims 120-161 of copending US Application 11/628608 (Attorney Docket No. 2004B063). Applicants respectfully traverse this rejection.

For the above maintained rejections, it is held that the instant claims are broader than the claims in the copending application with the distinction between the present claims and the copending claims being the instantly recited polymerization conditions of pressure and temperature. The basis for why the present claims would have been obvious over the copending claims have been provided in the prior rejection and, per those rejections, the basis for the obviousness comes from the disclosures of the copending applications themselves.

However, in making such rejections, the disclosure of the copending applications are being used contrary to what is permissible – the disclosure cannot be used to form an obviousness rejection, *General Foods Corp. v. Studiengesellschaft Kohle mbH*, 23 USPQ2d 1839 (Fed. Cir. 1992), and MPEP 804.II.B.1. While all use of the disclosure of a copending application is not precluded, the use of the copending disclosure is strictly limited to those portions of the disclosure which act as a dictionary to the claim terms or show an obvious variant to what is recited in the copending claims. Temperature and pressure conditions are not recited in the copending applications and thus do not need defining, nor are other conditions claimed which could possibly be obvious variants to the presently recited temperature and pressure. Thus, the use of the disclosure of the copending applications is impermissible, as duly noted in MPEP 504.II.B.1: “only the disclosure of the invention *claimed* in the patent may be examined.”

Thus, the obviousness basis for the above rejections is hereby addressed by Applicants and found unsupportable per the courts. It is requested that for these reasons, the obviousness basis of these rejections be reconsidered and withdrawn.

In the Final Office action, it is stated that the balance of Applicants arguments against the above rejection is that a two-way test should be applied. Applicants disagree – this

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argument was made only in regards to the obviousness type double patenting rejection over US 7402636. This obviousness type double patenting rejection is addressed below.

In regards to the above two rejections, Applicants prior arguments in regards to a dominating patent application are still held applicable and are incorporated herein by reference.

The judicially created doctrine of obviousness type double patenting was created to prevent the unjustified extension of a first patent term by claiming obvious variations in a second application. In the above two copending applications in relation to the present application, this is not the situation. At best, the present application dominates the copending application. Per MPEP 804.II, the present broader, earlier filed application simply "dominates" the copending later filed improvement applications and domination alone does not give rise to double patenting. Reciting a broader, generic claim, does not automatically render the claim obvious over later filed improvements.

This is clearly also recognized in MPEP 804.IB.1 which states that when a provisional obviousness type double patenting rejection is the only remaining rejection in the earlier filed of the two pending applications, while the later-filed application is still rejectable on other grounds (which both presumably are), the ODP rejection in the earlier case should be withdrawn and the earlier case allowed to grant.

In the present application, while there are two later-filed applications, the condition set forth in MPEP 804.IB.1 is still applicable for both cases: the other two cases are still rejectable. The present application dominates over the co-pending applications.

Based on the above arguments regarding Vanderberg, MPEP 804.IB.1, the filing of the terminal disclaimer over US 7402636, Applicants respectfully assert that the above ODP rejections should be withdrawn and the present application allowed to proceed to grant.

C. Claims 28, 2-7, 26, 30, 32, 34-40, 49, 51, and 59 stand rejected under the judicially created doctrine of obviousness-type double patenting over claims 1-31 of US Patent 7402636.

For this rejection, the recited addition of alcohol to the reactor in US 7402636 is being read as being the initiator in the rejected claims.

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In the Final Office Action, it is argued that Applicants intentionally twice delayed prosecution in the present application by Applicants selecting the maximum permissible delay in filing the present application – the first delay being the one year time period between the filing of the provisional priority application and the further 18 month delay asserted by filing a PCT application prior to filing the actual present application. First, this was permissible delays in filing of the present application – not delays in *prosecution*.

Regardless of Applicants path of choice in filing the present application, *this* application was filed in the US system 21 months prior to the filing of US 7402636. During that 21 months, the Office failed to issue a first office action until the case had more than a 12 month pendancy. Furthermore, during the subsequent prosecution occurring prior to the Notice of Allowance in US 7402636, Applicants filed only a single extension of time to file a response while the Office several times issued Office Actions more than 2 months after receipt of a response by Applicants (i.e. beyond the 2 month Office mandated rules).

While Applicants continue to vigorously protest this ODP rejection, it recognizes that the Office will likely not view the 12 month delay in issuing a first office action or delays in issuing subsequent Office Actions as applicable administrative delays.

To reduce the issues pending, and reduce the possible issues for appeal, a terminal disclaimer over US 7402636 is being filed concurrent with this response.

It is requested that this rejection be reconsidered and withdrawn.

Allowable subject matter

The indication of allowability of claim 31 is duly noted and appreciated. As evident by the substantive traversals of the rejections, Applicants believe all of the claims are allowable over both the cited prior art and the later filed patent applications.

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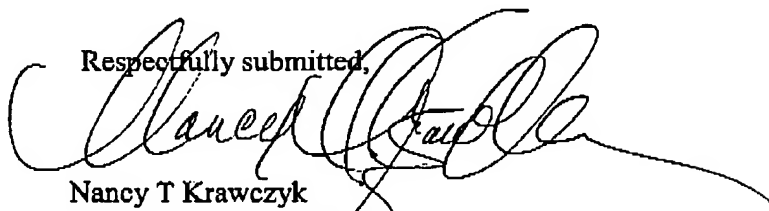
Conclusion

All of the outstanding rejections have been addressed and Applicants respectfully submitted that this application is in condition for allowance. Prompt notice of such is respectfully solicited.

Please charge any deficiency in fees or credit any overpayments during the entire pendency of this case to Deposit Account No. 05-1712.

July 29, 2009  
Date

Respectfully submitted,



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